

BUDGET CAMERAS

INTRODUCTION

We love cheap cameras. Admittedly, we're quite fond of expensive ones, too, but we can't imagine enjoying a swim in the ocean while constantly keeping an eye out for thieves who might be trying to steal our slim but costly ultra-zoom camera. Neither can we imagine taking a bulky digital SLR on a long walk in the countryside or a night out on the town. Today's cheap digital cameras are ideal for everyday use. They're small enough to pop into a bag or pocket, ready for any occasion, and the best models can take excellent pictures in even the toughest lighting conditions.

This month we tested 12 of the least-expensive digital cameras on the market, most of which cost less than £100. We put every one through a set of tough tests to see which take the best pictures in a variety of conditions, which are easiest to use and which will run for the longest on a single battery charge. However much you want to spend, we'll help you pick a great camera at a remarkably low price.

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SNAP UP A BARGAIN

Who says you can't get a decent digital camera for less than £100? We test 12 budget snappers that'll put a smile on your face

Choosing a... Budget Digital Camera

You might assume that it's tough to find a truly great digital camera with a budget of just £100. If you know what to look for, though, you can pick up an excellent camera and have enough money left over for a memory card, case and spare batteries. Our guide will explain what to look for, and which features you can safely ignore.

ON BALANCE

Designing a digital camera on a shoestring budget inevitably involves an element of compromise. We're willing to accept compromises in some areas, such as screen size and advanced features, for example, but other areas are much more important. Compromises in image quality, performance, build quality or ease of use can render a camera unusable and should be avoided. When you're looking for a budget camera, you must ensure that it takes reliably good pictures without keeping you waiting between shots. Our reviews tell you which manage this, and which fall short.

PICTURE PERFECT

Image quality isn't something you can assess by taking a single photo. As usual, all the cameras here managed to produce attractive photos of scenery taken on a

sunny day. However, in real life only a small fraction of photos are taken in these conditions. Just as common are outdoor shots taken in gloomier weather, indoor shots with the flash, artificial light or ambient sunlight, close-ups, strong backlights and complex scenes with mixed light sources. Cameras that can take all these conditions in their stride are few and far between, but they do exist, even at this price. Our reviews explain how each camera fared in our taxing image-quality tests, and we'll also let you know exactly what kind of problems, if any, we encountered.

SPEED DEMONS

We set our standards for performance a little lower than we do for image quality. This is not because it's less important, as a camera that takes ages to switch on is just as capable of ruining a photo opportunity as one that gets colours wrong and produces blurry pictures. By today's standards, though, even a moderately fast camera is fast enough to keep up with most situations. The fastest models in this test are great for nature or sports photography where every second counts, but most people will find anything that's able to take a picture every two seconds perfectly fast enough for normal use. A few cameras here fell disappointingly



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short of this kind of pace, however, and we've mentioned this in our reviews.

Ease of operation is critical in a camera intended for everyday use, but none of the cameras here gave us serious cause for concern. Many have simplified controls, relying on automatic modes and scene presets rather than traditional manual controls. As such, none is likely to baffle inexperienced users. The same is true of build quality: a fragile camera is no use to anyone, but no model on test was especially delicate. Where a camera feels particularly sturdy, we've mentioned this in our reviews.

EXTRA, EXTRA

As long as a camera produces good images and is reasonably fast, easy to use and sturdy, you can start to consider the little extras that add to the enjoyment of owning a camera. Compact, attractive designs, big screens and features such as an extended zoom range or optical image stabilisation can all be useful. Our table on page 94 shows all the features each camera offers, and our reviews will highlight any particularly impressive, or disappointing, features.

Every camera here is capable of recording short movie clips, but some do a far better job of capturing moving images than others. Most record short videos at a resolution of 640x480-pixels with sound, but our reviews will explain which are more limited. You can also find the

resolution and speed of each camera's movie mode in our table on page 94.

POWER PLANT

There's no point in having a camera that can take great pictures if its battery always runs out half an hour before that once-in-a-lifetime moment. The cameras here use either AA batteries or a rechargeable Li-ion cell, and both methods have advantages. A rechargeable battery will save you money and is convenient, but if it runs out half-way through the day there's no immediate way to add more power

and keep snapping. On the other hand, AA batteries are easy to replace and are on sale just about anywhere, but if you take lots of pictures you could end up spending a lot of money on spares or a high-capacity rechargeable set.

Whichever type of battery a camera uses, though, there's no way of telling how well its battery will perform without actually testing it. We put each camera through a standardised battery test, and you can see the number of shots each produced in our table on page 94. The best cameras here lasted for over 500 shots, while some failed before they managed 300.

How we test Digital cameras

To compare image quality we shoot 35 controlled scenes with each camera. These are designed to challenge the cameras in different ways. We use flash photography on a still life to measure corner-to-corner focus, for example, and a portrait shot on a dark background to see how cameras cope with over-exposed highlights. Some tests are conducted using manual settings, but for the vast majority we use automatic modes as this is how most low-cost cameras are used. We score each camera out of 10 for each scene and 15 other tests that measure colour

accuracy, detail, image noise and how well chosen the automatic settings are.

To test performance we measure how long each camera takes to switch on and take a picture, and how many maximum-quality shots it can capture in 30 seconds. We repeat this test in bright and dark conditions, with and without the flash and in continuous mode. We test battery life using a mechanical arm to take a photo every 30 seconds until the battery runs out. For cameras that use AA batteries, we use a pair of 2,300mAh nickel metal hydride (NiMH) rechargeable cells.

CANON PowerShot A460

★★★★

£79 inc VAT



Canon's most affordable digital camera is available in blue, red or silver. Its chunky shape isn't ideal for pockets and handbags, and at 215g with two AA batteries inserted, it's heavy. The battery door feels flimsy, and Canon has made other cost-saving measures, including the 2in, 86,000-pixel screen and the lack of dedicated zoom controls. The up and down navigation buttons double as zoom controls, which has annoying repercussions, as zooming out after taking a picture made the camera think we wanted to delete the previous shot. With a 5-megapixel sensor it has one of the lowest resolutions here, but the 4x zoom more than compensates and is a real benefit next to the 3x zooms on other cameras.

The PowerShot's performance is excellent, taking just 1.7 seconds to turn on and shoot and 1.4 seconds between pictures. However, the flash took eight seconds to recharge between shots. Continuous mode ran at an impressive 1.6 frames per second (fps), but the video mode is limited to 10fps at the maximum 640x480 resolution.

The 5-megapixel resolution had little discernible impact on image quality, and the A460 scored better than average for image detail.

However, with a physically small charge-coupled device (CCD), its pictures suffer from more noise than those of other cameras. ISO 400 is the highest available sensitivity, and it gave grainy results. Colours were excellent in favourable lighting, but low-light photography without the flash was often under-exposed.

The PowerShot is a reasonable camera for the price, but you can get better if you spend a little more.

SUMMARY

- ✓ 4x zoom; fast performance
- ✗ Basic screen and video capture
- ✗ Noisy images

COMPACT DIGITAL CAMERA 5.0 megapixels (2,592x1,944 pixels), 4x optical zoom, 16MB SD card memory, SDHC slot, 2x AA batteries
PART CODE 1784B007AA
SUPPLIER www.amazon.co.uk
DETAILS www.canon.co.uk

CANON PowerShot A550

★★★★★

£102 inc VAT



The PowerShot A550 costs £23 more than Canon's entry-level A460, but it justifies this with a few useful features. It has a higher-resolution sensor, captures video at 30fps and has a more sophisticated nine-point auto-focus system rather than the A460's four-point system. It also has a more conventional button layout with a dedicated zoom lever. A button adjusts the ISO speed, which includes a Hi option for low-light photography, and various scene presets are available from the mode dial. The screen is a basic 2in, 86,000-pixel affair but there's also an optical viewfinder. The design lacks glamour, but the handgrip makes this the most comfortable camera here to hold. Its performance is impressive, taking 1.6 seconds between shots, while the continuous mode runs at 1.7fps.

Image tests revealed consistently excellent colours in pictures taken in a range of lighting conditions. Shots taken in low light were the only exception, where the Hi ISO mode was needed to avoid under-exposure. Skin tones were particularly flattering, with a warm, natural tone even when using the flash. The level of detail captured was average compared with that of other cameras here, but the 4x zoom helped to produce detailed telephoto shots. While high ISO settings resulted in more image noise than the best cameras produced, we appreciate Canon's cautious use of noise-reduction processing. Some manufacturers use too much, obliterating image detail.

The A550 is a good camera that's reasonable value. It doesn't have a trump card to match the five-star rated cameras, but its 4x zoom is extremely useful.

SUMMARY

- ✓ 4x zoom lens
- ✓ Fast performance
- ✗ Basic screen

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 4x optical zoom, 16MB SD card memory, SDHC slot, 2x AA batteries
PART CODE 1775B008AA
SUPPLIER www.amazon.co.uk
DETAILS www.canon.co.uk

FUJIFILM FinePix A800

★★★★

£97 inc VAT



The A800 is the only 8-megapixel camera in this group, but a high megapixel count doesn't necessarily result in sharper pictures. More important is the large $\frac{1}{1.6}$ in CCD, which helps to reduce image noise. The camera is a little larger than the others, but its 2 $\frac{1}{2}$ in screen is welcome despite its low 115,000-pixel resolution. Both xD and SD slots are included, so you're not obliged to use slow, overpriced xD memory cards.

At first we thought the A800 lacked manual ISO speed and white balance settings, but the last entry in the list of scene presets, labelled Manual, provides access to these features. Most people who buy £100 cameras don't want these options, but hiding them like this seems odd. Metering options are unavailable in all modes, so you'll have to resort to exposure compensation to cope with very bright or dark backgrounds.

The 320x240-pixel maximum video resolution suggests that the camera's processor is underpowered. Its still image performance confirms this, as the camera takes around three seconds to recover between pictures. There's no continuous mode, but this is no real loss: judging by the lag between normal shots it would have been extremely slow.

The A800's image quality was above average and its large CCD produced relatively little noise, but automatic settings tended to under-expose high-contrast scenes. The amount of detail in images was no better than in those from the 6-megapixel Fujifilm F20. With annoyingly slow performance, the A800 isn't a good buy.

SUMMARY

- ✓ Minimal image noise
- ✗ Slow performance
- ✗ Basic video mode

COMPACT DIGITAL CAMERA 8.1 megapixels (3,296x2,472 pixels), 3x optical zoom, 10MB internal, 16MB xD memory, xD slot, SD slot, 2x AA battery
PART CODE N079090A
SUPPLIER www.amazon.co.uk
DETAILS www.fujifilm.co.uk

FUJIFILM FinePix F20

★★★★★

£99 inc VAT



The F20 picked up a Best Buy award seven months ago (*What's New, Shopper* February 2007) when it cost £135. Now at just under £99, it's the budget camera that all others must beat.

This is one of only three cameras in this group to have a metal body and come with a lithium ion battery, which avoids the hassle and expense of using AA batteries. Its curvy design is better looking than most, but at 150g it's a little heavier than most, too. The 2 $\frac{1}{2}$ in screen's 150,000-pixel resolution is above average in this group, and its 1600 top ISO speed is the highest here, allowing you to take photos without a flash in low light. Otherwise its features are fairly run-of-the-mill, and annoyingly it uses slow, expensive xD memory cards.

The F20 is in the middle of the pack for performance. It takes two seconds to switch on and take a photo, and there's a similar gap between shots. The auto-focus is particularly fast and, in general, the camera doesn't keep you waiting, but browsing the pictures you've taken is slow.

The quality of images taken with the F20 is a step up from all the other cameras in the group. Using the same sensor and similar image processing as the outstanding F31fd (reviewed in *What's New, Shopper* April 2007), it produced the most pleasing colours, the sharpest detail and the lowest noise of all the cameras here. It also made intelligent decisions over automatic settings, getting the best possible images in tricky lighting conditions. This is an excellent camera at a good price.

SUMMARY

- ✓ Superb image quality
- ✓ Smart design
- ✗ Uses only xD media

COMPACT DIGITAL CAMERA 6.1 megapixels (2,848x2,136 pixels), 3x optical zoom, 10MB internal memory, xD slot, 3.6V 1,150mAh Li-ion battery
PART CODE N077830A
SUPPLIER www.amazon.co.uk
DETAILS www.fujifilm.co.uk

NIKON Coolpix L10

★★★★★

£66 inc VAT



Nikon's L10 is the most affordable digital camera with a zoom lens we have ever seen. It doesn't look cheap, though, and its build quality seems just as robust as that of the other cameras in the group. The screen is relatively small at 2in across, but its 153,000-pixel resolution is among the most detailed here. It's the only camera here to include face detection, but this adjusts only the focus and not exposure, and it is slow to track movement. Other photographic controls are extremely basic, with no ISO speed or metering options available.

The camera ran for a respectable 467 shots on a pair of high-capacity AA NiMH batteries, but it didn't reserve enough power to retract its lens before switching off. This could be a serious nuisance if your batteries run out while you're away from home. Its performance is up to scratch, taking 2.1 seconds between shots, although this rises to eight seconds when using the flash. The continuous mode is erratic but it managed to capture 41 shots in 30 seconds.

The L10 came sixth in our image quality tests, an extremely impressive result considering its low price and the high standard of the competition.

It often won the top spot for colour accuracy and slipped up only once, mistaking dense green foliage for a tinted light source and attempting to correct for it. Its 5-megapixel sensor means that it records slightly less detail than most cameras here, but it was sharp enough for standard-sized prints and viewing onscreen. This is a good camera at a very low price, but we'd recommend paying a little more for Panasonic's DMC-LS60.

SUMMARY

- ✓ Very low price
- ✓ Dependable image quality
- ✗ Basic controls

COMPACT DIGITAL CAMERA 5.0 megapixels (2,560x1,920 pixels), 3x optical zoom, 7MB internal memory, SD slot, 2x AA batteries
PART CODE 16643
SUPPLIER www.amazon.co.uk
DETAILS www.nikon.co.uk

OLYMPUS FE-210

★★★★★

£81 inc VAT



Olympus's entry-level digital camera makes a good first impression thanks to its 2½in screen and straightforward controls. The mode dial includes a high-sensitivity setting, although the wobbly hand icon and the acronym "DIS" that appears on the screen might baffle inexperienced users. Another dial position labelled Guide presents various camera options as a series of tasks such as "brightening subject" and "blurring background". Sadly, these beginner-friendly options come at the expense of standard controls.

Exposure compensation is included, but there's no ISO speed control and no white balance setting. The latter would be forgivable if the camera's automatic white balance was reliable, but it isn't. Pictures taken in low artificial light had a strong yellow tint, and pictures taken using the flash sometimes looked blue. This is just the start of the FE-210's image quality troubles. Pictures suffered from soft focus that was bad enough to be clearly visible when printed on 4x6in photo paper, and image noise was noticeable even in shots taken in bright lighting conditions.

The FE-210 failed to recover any ground in our performance tests. It takes nearly five seconds to start up and take a picture, so you could easily miss the event you want to capture,

and with the camera running it can capture just one image every four seconds. Browsing photos stored on an xD card was just as slow, although viewing four, nine, 16 or 25 pictures at a time makes it faster to find a specific shot. Video is recorded at a resolution of 640x480 pixels, but with no sound.

With poor performance, limited controls, soft focus and noticeable image noise, the FE-210 is poor value.

SUMMARY

- ✗ Poor image quality
- ✗ Slow performance
- ✗ Supports only xD cards

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 3x optical zoom, 9MB internal memory, xD slot, 2x AA battery
PART CODE 009649
SUPPLIER www.amazon.co.uk
DETAILS www.olympus.co.uk

OLYMPUS FE-230

★★★★★

£107 inc VAT



Olympus claims that the FE-230 is 16.5mm thick, which would make it the slimmest camera we have seen. We measured 19mm at its thickest point, but this is still extremely slim, especially for such an affordable camera. There's no room inside for AA batteries so a rechargeable Li-ion cell is supplied, but its small dimensions mean that the camera's battery life is below average at 296 shots. The 2½in screen dominates the back of the camera, but there's enough room for a mode dial and a decent set of buttons with a nice positive action to them.

Squeezing a camera into such a tiny case is a fine achievement, but it's a shame that the camera Olympus chose to squeeze inside is essentially an FE-210 (see above). All the problems outlined in the FE-210's review apply to this model, including extremely slow performance, soft focus and limited user controls that leave no means of fixing white balance flaws.

Another annoying problem with both cameras is that the flash reverts to Auto mode every time you change mode or turn the camera on. The only FE-210 flaw that Olympus has fixed in the FE-230 is that you can record video files with sound, but with a maximum recording time of 15 seconds at the maximum quality setting, this has few practical uses.

The FE-230 is impressively compact and can take some attractive photos, but its image quality is below the standard of most cameras here and its performance is frustratingly slow. Considering that it's one of the most expensive cameras in this group, it's particularly poor value.

SUMMARY

- ✗ Poor image quality
- ✗ Slow performance
- ✗ Supports only xD cards

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 3x optical zoom, 20MB internal memory, xD slot, 3.7V 740mAh Li-ion battery
PART CODE 009465
SUPPLIER www.amazon.co.uk
DETAILS www.olympus.co.uk

PANASONIC Lumix DMC-LS60

★★★★★

£85 inc VAT



BUDGET BUY **COMPUTER SHOPPER** Panasonic cameras have had an excellent track record in recent *Shopper* reviews, so we had high hopes for the DMC-LS60. Most of its specifications are typical for an entry-level camera, and its 2in, 86,000-pixel screen is disappointing, but the Lumix has a unique feature in this group: optical image stabilisation. This technology uses sensors and a tilting lens to counteract camera shake. This proved very useful in our test shots taken at dusk on automatic settings. The LS60 produced sharp pictures where most other cameras captured blurry ones.

The LS60 was excellent in our tests, waiting just 1.5 seconds between shots. Its 1.7fps continuous-shooting mode is the fastest here. Flash photography was slower, taking three seconds to recharge between shots, but this seems inevitable when using AA batteries. The menus are fast and friendly but lack metering options. However, it's great to see Panasonic's Intelligent ISO feature included. This system makes smart decisions about ISO speed depending on available light and the movement of the subject, while allowing the user to define the maximum acceptable ISO speed.

The LS60 came third in our image-quality tests, producing high-quality images in most situations. The only exceptions were the results of our low-light tests at ISO 800, where heavy noise-reduction processing still let some unsightly blotches through. Fortunately, with image stabilisation, ISO 800 is rarely necessary.

With good performance, image quality and image stabilisation, this is an excellent camera for a low price.

SUMMARY

- ✓ Fast performance
- ✓ Optical image stabilisation
- ✗ Low-resolution screen

COMPACT DIGITAL CAMERA 6.0 megapixels (2,816x2,112 pixels), 3x optical zoom, 27MB internal memory, SDHC slot, 2x AA battery
PART CODE DMC-LS60EBS
SUPPLIER www.amazon.co.uk
DETAILS www.panasonic.co.uk

PENTAX Optio E30

★★★

£85 inc VAT



Pentax's entry-level camera is a typical example of the quality and features you can expect for around £85 including VAT. Its best asset is its battery life, which at 557 shots was the best in the group, but you'll need to buy high-capacity NiMH batteries and a charger to achieve similar results. It's the only camera here that offers full manual focus, but the 110,000-pixel screen makes accurate adjustments difficult despite a temporary digital zoom that gives you a close-up view when focusing.

The Optio's performance is pedestrian. It takes around three seconds to power up and take a first picture, and there's a gap of just under three seconds between subsequent shots regardless of lighting conditions, flash settings or whether the continuous mode is selected. The menus are slow to respond to button pushes, but their layout is clear. It's disappointing that there is no high-sensitivity scene preset for low-light shooting without the flash, but this is not surprising given the relatively large amount of noise in images taken at the camera's top ISO setting of 400.

This camera doesn't disgrace itself, but it can't compete with the best models here. Focus and detail were a little soft, and the 15cm minimum macro focus distance is poor compared with the 5cm that most of the cameras can manage. Some shots suffered from over-saturated colours, high-contrast scenes were often under-exposed and skin tones took on a yellow tint with the flash. None of these problems was disastrous, but better quality is available elsewhere. Panasonic's Lumix offers better performance and image quality for the same price.

SUMMARY

- ✓ Long battery life
- ✓ Manual focus
- ✗ Too many minor quality flaws

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 3x optical zoom, 11MB internal memory, SDHC slot, 2x AA battery
PART CODE 18836
SUPPLIER www.amazon.co.uk
DETAILS www.pentax.co.uk

SAMSUNG Digimax S630

★★★

£79 inc VAT



The S630 is the smaller sibling to Samsung's S850, a £100 camera with exceptional image quality and full photographic control that narrowly missed out on an award last month because of its flawed automatic exposure settings. Like the S850, the S630 offers manual exposure, which is a must for creative photographers or anyone who wants to experiment with their images. The automatic exposure bracketing feature takes three pictures of varying exposure, allowing you to choose the best later or even combine the three with software, but the two-second gap between shots is too slow for our liking. Aperture priority, shutter priority and manual focus are unavailable, so budding creative photographers on a budget are better off with the S850.

In normal use the S630 is slow, taking three seconds to recover between shots despite an impressively fast auto-focus. Continuous mode shoots at a passable 0.86 frames per second, but the screen is blank and there are no audible cues to reassure the user that anything is happening. Its battery life was the worst of the cameras here. It ran for just 282 shots in our test, despite using the same high-capacity NiMH AA batteries that produced 557 shots with Pentax's E30.

Image quality proved extremely variable in our tests, and ultimately the S630 came seventh in our quality league table. We struggled to find a pattern to identify which conditions produced the worst results, but ultimately its poor photos stood out more than its best shots. We'd pay more for the Panasonic Lumix or Fujifilm F20, both of which produce consistently better images.

SUMMARY

- ✓ Manual exposure
- ✗ Slow performance
- ✗ Variable image quality

COMPACT DIGITAL CAMERA 6.0 megapixels (2,816x2,112 pixels), 3x optical zoom, 16MB internal memory, SDHC slot, 2x AA battery
PART CODE 8801089416513
SUPPLIER www.dabs.com
DETAILS www.samsungcamera.co.uk

SONY Cyber-shot DSC-S650

★★★

£85 inc VAT



A year ago we reviewed Sony's S600 and W30 cameras in our budget camera lab test and found that despite cosmetic differences they were very similar. This time their successors, the S650 and W35, look similar but perform quite differently. Externally, the main differences are the S650's plastic body and its use of AA batteries, which you'll need to buy separately once the disposables run out. When we removed the sticker from the front of the camera it left sticky gunk that proved almost impossible to remove. This is a small complaint, but it's the kind of thing that can really spoil the pleasure of owning a new camera.

With a gap of just 1.7 seconds between shots the S650's performance is above average, but it fell to almost four seconds between shots with the flash. More disappointingly, the one frame-per-second continuous mode ran for just three seconds before taking a rest. The highest resolution for video is just 320x240 pixels. Most cameras here can record at 640x480.

The quality of pictures taken by the S650 wasn't a patch on those from the best cameras here. Its flash produced unflattering colour casts, and it handled highlights badly. Noise was intrusive at ISO 400 and disastrous at the top ISO 1000 setting, and detail was mostly below average. Colours were excellent in bright, natural light, although few cameras struggle with this. Well-chosen automatic settings mean you'll rarely need to delve into the menus, but this is a poor camera compared with the W35, and poor value compared with the similarly priced Panasonic Lumix.

SUMMARY

- ✓ Good automatic settings
- ✗ Basic image quality
- ✗ Basic video recording

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 3x optical zoom, 24MB internal memory, Memory Stick Pro Duo slot, 2x AA battery
PART CODE DSCS650.CEH
SUPPLIER www.amazon.co.uk
DETAILS www.sony.co.uk

SONY Cyber-shot DSC-W35

★★★★★

£109 inc VAT



The DSC-W35 is the successor to Sony's W30, which we named Best Photography Product of 2006. It's the most expensive camera in the group, but £109 is hardly pricy. Its screen is 2in across and has a meagre 85,000 pixels, but the W55 (*What's New, Shopper* July 2007) is largely the same camera with a 2½in screen. Unlike most of the cameras here the W35 has an aluminium case and a Li-ion battery, which lasted for an impressive 526 shots in our test. It's more compact than most, too.

The W35 was impressive in our speed tests, taking just 1.5 seconds to switch on and take a picture, and 1.3 seconds between shots, making it the fastest camera here. It's disappointing that the continuous mode is limited to four shots, but a Multi Burst option captures 16 one-megapixel shots at up to 30 frames per second (fps). The menus are straightforward and efficient and offer a generous selection of features, including contrast and sharpness. There's also a choice of five manual focus presets, ranging from 50cm to infinity. The macro mode focuses on subjects just 2cm from the lens for microscopic close-ups.

The W35 produced exceptionally high-quality images and excelled at flash photography. Low-light shots were often too dark, but a high-sensitivity mode is easy to access from the mode dial. This gave credible results using ISO 1000, although they're not quite as good as the F20's ISO 1600 pictures.

This is a very good camera, but Fujifilm's FinePix F20 takes similarly excellent photos and costs a little less.

SUMMARY

- ✓ Fast performance
- ✓ High image quality
- ✗ Low-resolution screen

COMPACT DIGITAL CAMERA 7.1 megapixels (3,072x2,304 pixels), 3x optical zoom, 56MB internal memory, Memory Stick Pro Duo slot, 3.6V 945mAh Li-ion battery
PART CODE DSCW35S.CEH
SUPPLIER www.amazon.co.uk
DETAILS www.sony.co.uk

BUDGET DIGITAL CAMERAS



MANUFACTURER	CANON	CANON	FUJIFILM	FUJIFILM	NIKON	OLYMPUS
Model	PowerShot A460	PowerShot A550	FinePix A800	FinePix F20	Coolpix L10	FE-210
Rating	★★★	★★★★	★★★	★★★★★	★★★★	★★
Effective number of pixels	5.0 megapixels	7.1 megapixels	8.1 megapixels	6.1 megapixels	5.0 megapixels	7.1 megapixels
Viewfinder	None	Optical	None	None	None	None
LCD screen	2in (86,000 pixels)	2in (86,000 pixels)	2½in (115,000 pixels)	2½in (150,000 pixels)	2in (153,000 pixels)	2½in (154,000 pixels)
Optical zoom (35mm equiv.)	4x (38-152mm)	4x (35-140mm)	3x (36-108mm)	3x (36-108mm)	3x (37.5-112.5mm)	3x (38-114mm)
Image stabilisation	None	None	None	None	None	None
Maximum image resolution	2,592x1,944	3,072x2,304	3,296x2,472	2,848x2,136	2,560x1,920	3,072x2,304
Maximum movie quality	640x480 at 30fps	640x480 at 30fps	320x240 at 30fps	640x480 at 30fps	640x480 at 30fps	640x480 at 30fps
File formats (still; movie)	JPEG; AVI (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; QuickTime (M-JPEG)	JPEG; AVI (M-JPEG)
CAMERA CONTROLS						
Exposure modes	Program	Program	Program	Program	Program	Program
Shutter speed	Auto	Auto	Auto	Auto	Auto	Auto
Aperture range	Auto	Auto	Auto	Auto	Auto	Auto
ISO range (at full resolution)	80 to 400	80 to 800	100 to 800	100 to 1600	Auto	Auto
Exposure compensation	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV
White balance	Auto, five presets, manual	Auto, five presets, manual	Auto, six presets	Auto, six presets, manual	Auto, five presets, manual	Auto
Additional image controls	None	None	None	None	None	None
Manual focus	No	No	No	No	No	No
Closest macro focus	1cm	5cm	10cm	5cm	15cm	5cm
Auto-focus modes	Multi, centre	Multi, centre	Multi	Multi, centre	Multi	Multi
Flash modes	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction, slow and red-eye	Auto, forced, suppressed, slow synchro, red-eye reduction, slow and red-eye	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, red-eye reduction
Drive modes	Single, continuous, self-timer	Single, continuous, self-timer	Single, self-timer	Single, continuous, self-timer	Single, continuous, self-timer	Single, self-timer
PHYSICAL						
Memory type (supplied)	SDHC slot (16MB SD card)	SDHC slot (16MB SD card)	xD slot, SD slot (10MB internal, 16MB xD)	xD slot (10MB internal)	SD slot (7MB internal)	xD slot (9MB internal)
Power	2x AA	2x AA	2x AA	3.6V 1,150mAh Li-ion	2x AA	2x AA
Battery life (tested)	429 shots	503 shots	425 shots	432 shots	467 shots	377 shots
Connectivity	USB	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB	USB Hi-Speed
Body material	Plastic	Plastic	Plastic	Aluminium	Plastic	Plastic
Accessories	USB and AV cables	USB and AV cables	USB and AV cables	USB and AV cables, charger	USB cable	USB and video cables
Weight (with card/battery)	165g	160g	151g	150g	115g	122g
Dimensions (HxWxD)	52x106x40mm	64x91x43mm	62x98x31mm	57x94x27mm	61x90x26mm	63x90x31mm
BUYING INFORMATION						
Price inc VAT	£79	£102	£97	£99	£66	£81
Supplier	www.amazon.co.uk	www.amazon.co.uk	www.amazon.co.uk	www.amazon.co.uk	www.amazon.co.uk	www.amazon.co.uk
Details	www.canon.co.uk	www.canon.co.uk	www.fujifilm.co.uk	www.fujifilm.co.uk	www.nikon.co.uk	www.olympus.co.uk
Part code	17848007AA	17758008AA	N079090A	N077830A	16643	009649



MANUFACTURER	OLYMPUS	PANASONIC	PENTAX	SAMSUNG	SONY	SONY
Model	FE-230	Lumix DMC-LS60	Optio E30	Digimax S630	Cyber-shot DSC-S650	Cyber-shot DSC-W35
Rating	★	★★★★★	★★★	★★	★★	★★★★★
Effective number of pixels	7.1 megapixels	6.0 megapixels	7.1 megapixels	6.0 megapixels	7.1 megapixels	7.1 megapixels
Viewfinder	None	None	None	None	None	Optical
LCD screen	2½in (115,000 pixels)	2in (86,000 pixels)	2.4in (110,000 pixels)	2½in (150,000 pixels)	2in (115,000 pixels)	2in (85,000 pixels)
Optical zoom (35mm equiv.)	3x (38-114mm)	3x (35-105mm)	3x (36-108mm)	3x (35-105mm)	3x (35-105mm)	3x (38-114mm)
Image stabilisation	None	Optical, lens based	None	Electronic	None	None
Maximum image resolution	3,072x2,304	2,816x2,112	3,072x2,304	2,816x2,112	3,072x2,304	3,072x2,304
Maximum movie quality	640x480 at 30fps	640x480 at 30fps	640x480 at 28fps	640x480 at 30fps	320x240 at 30fps	640x480 at 30fps
File formats (still; movie)	JPEG; AVI (M-JPEG)	JPEG; QuickTime (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; AVI (M-JPEG)	JPEG; MPEG-1
CAMERA CONTROLS						
Exposure modes	Program	Program	Program	Program, manual	Program	Program
Shutter speed	Auto	Auto	Auto	8 to 1/1,500 seconds	Auto	Auto
Aperture range	Auto	Auto	Auto	f/2.8 to f/7.1	Auto	Auto
ISO range (at full resolution)	Auto	100 to 1250	80 to 400	80 to 400	100 to 1000	100 to 1000
Exposure compensation	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV	+/-2 EV
White balance	Auto	Auto, four presets, manual	Auto, four presets, manual	Auto, five presets, manual	Auto, five presets	Auto, five presets
Additional image controls	None	None	Contrast, saturation, sharpness	Contrast, saturation, sharpness	Sharpness	Contrast, sharpness
Manual focus	No	No	Yes	No	No	Five preset distances
Closest macro focus	5cm	5cm	15cm	5cm	5cm	2cm
Auto-focus modes	Multi	Multi, centre	Multi, centre	Multi, centre	Centre-weighted	Multi, centre
Flash modes	Auto, forced, suppressed, red-eye reduction	Auto, forced, suppressed, red-eye reduction	Auto, forced, suppressed, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction	Auto, forced, suppressed, slow synchro, red-eye reduction
Drive modes	Single, self-timer	Single, continuous, self-timer	Single, continuous, self-timer	Single, continuous, exposure bracket, self-timer	Single, continuous, self-timer	Single, continuous, self-timer
PHYSICAL						
Memory type (supplied)	xD slot (20MB internal)	SDHC slot (27MB internal)	SDHC slot (11MB internal)	SDHC slot (16MB internal)	Memory Stick Pro Duo slot (24MB internal)	Memory Stick Pro Duo slot (56MB internal)
Power	3.7V 740mAh Li-ion	2x AA	2x AA	2x AA	2x AA	3.6V 945mAh Li-ion
Battery life (tested)	296 shots	372 shots	557 shots	282 shots	446 shots	526 shots
Connectivity	USB	USB	USB	USB Hi-Speed	USB	USB Hi-Speed
Body material	Aluminium	Plastic and metal	Plastic	Plastic	Plastic	Aluminium
Accessories	USB and AV cables, charger	USB and AV cables	USB and AV cables	USB cable	USB and AV cables	USB and AV cables, charger
Weight (with card/battery)	105g	135g	138g	140g	130g	118g
Dimensions (HxWxD)	55x91x19mm	62x94x30mm	62x95x35mm	61x94x25mm	61x91x27mm	59x90x23mm
BUYING INFORMATION						
Price inc VAT	£107	£85	£85	£79	£85	£109
Supplier	www.amazon.co.uk	www.amazon.co.uk	www.amazon.co.uk	www.dabs.com	www.amazon.co.uk	www.amazon.co.uk
Details	www.olympus.co.uk	www.panasonic.co.uk	www.pentax.co.uk	www.samsungcamera.co.uk	www.sony.co.uk	www.sony.co.uk
Part code	009465	DMC-LS60EBS	18836	8801089416513	DSCS650.CEH	DSCW355.CEH

Labs verdict Budget digital cameras

Five cameras stand out. If funds are tight, Nikon's L10 is a bargain at £66, and its basic controls are unlikely to put novices off. For £100, Canon's A550 is an excellent choice with no real weaknesses and a 4x zoom. However, it doesn't quite beat the top three.

Panasonic's LS60 is extremely responsive and produces superb photos in its Intelligent ISO (400) mode. Best of all, it has optical image stabilisation to avoid blur from camera shake. This is remarkable in an £85 camera, and the LS60 deserves our Budget Buy award.

Sony's W35 is the most expensive camera here, but we would pay a bit more for its metal body and Li-ion battery. It's compact, it has superb battery life and the best performance here, and its photos were unerringly excellent.

However, the camera that entered this test with a Best Buy award has defended its title. The FujiFilm F20 doesn't put a foot wrong, with a smart metal body, Li-ion battery, 2½in screen, friendly controls and dependable performance, but it's image quality that sets it apart. It came top in our colour accuracy, detail



FUJIFILM
FinePix F20

★★★★★



PANASONIC
Lumix DMC-LS60

★★★★★



and noise tests, particularly in low light, and displayed the smartest automatic mode on test. At £99 it's an incredible bargain, and it wins our Best Buy award. **GB**